Placing Livestock in Landscape Studies:

Pastures New or Out to Graze?

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Abstract

This paper reviews research on livestock and landscape. It argues that farm animals have started to occupy a central position in landscape studies, opening up many new pastures for research. Using the example of cattle in the UK, we consider how livestock have been understood as text, as social constructions and as beings with their own lives. In each case, we note how the position of farm animals is contested and there is a need for a diversity of theoretical approaches to understand these differences. The article calls for academics, practitioners and policy makers to pay greater attention to the myriad ways in which livestock and landscape are intertwined.

Key Words

Livestock, Landscape, Social Constructions, Post-human, Hybridity.

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1. Introduction

Seventeen years ago a paper published in *Landscape Research* entitled 'Livestock and Landscape' (Evans & Yarwood, 1995) made a straightforward point: livestock breeds were an important but neglected aspect of landscape studies. It went on to use examples of cattle breeds to illustrate how livestock contributed to historic landscapes, social constructions of rurality and senses of place in the UK. The article called for greater attention to be paid to *breeds* of livestock in landscape studies and for the significance of '*cattlescapes*' to be more widely recognised by academics and policy makers.

Farm animals have since taken a more prominent position on academic research agendas and a plethora of work has emerged on livestock and landscape. This has been driven by a renewed and vigorous interest in 'animal geographies' (Emel & Wolch, 1995; Philo, 1995; Jones, 2006; Philo & Wilbert, 2000; Whatmore, 2005; Wilbert, 2009) as well as new theoretical directions in landscape studies (Wylie, 2007). At the same time, other events have served to bring farm livestock and their place in the landscape to the attention of the public and policy makers. Most notably, empty fields during UK's foot-and-mouth disease (FMD) outbreak of 2001 (Scott *et al.*, 2004) were a stark reminder of livestock's significance to British farming landscapes (Convery *et al.*, 2005).

Consequently, a vibrant and expanding field of study has emerged that utilises a range of approaches, from empirical mapping to relational ontologies, and from affective exchanges to a *'pratique sauvage'* (Elder *et al.*, 1998) to understand landscape/livestock relations. What emerges, however, is that these relationships are both complex and contested. Lewis Holloway's work, for example, reveals two starkly contrasting ways in which farmers see livestock: both as valued and prized individuals (Holloway, 2001, 2004) and/or as production statistics created by breed societies (Holloway *et al.*, 2009). Yet both views co-exist in the same landscape spaces. How, if at all, can these differences be reconciled?

With this is mind, this paper provides a review of progress in research since 'Livestock and Landscape' and explores how different theoretical approaches provide important but diverse perspectives on the ways in which animals are positioned in landscapes. Our aim is not to privilege one paradigm over another nor, indeed, to seek a unifying view of livestock and landscape but, rather, to highlight that the places of farm animals in the countryside are important, contested and should not be taken for granted or read in one particular way.

The paper is structured into three sections that reflect interconnected aspects of rurality (Halfacree, 2006). The first section considers livestock and locality, in particular analysing some of the processes and agencies that are responsible for shaping the geographies of livestock and landscape. Here landscape is considered a text upon which the location of livestock can be viewed, read and explained. The second section considers the representation of livestock on landscape and, consequently, how they are socially constructed (Demeritt, 2002). The final section reviews the 'everyday' lives of people and farm animals and, in doing so, moves beyond interpretative and iconographic approaches to consider how livestock and landscape are discursively and corporeally reproduced through practices and

performances (Wylie, 2007). These themes are largely illustrated within the context of cattle in the UK, allowing contrasts to be drawn with the 1995 article.

2. Landscape and Locality

Nick Evans and Richard Yarwood (1995) noted that little was known about the basic geographies of livestock breeds and the extent to which breeds could be associated with particular places. This prompted research into the distribution of rare livestock breeds in the UK (Evans & Yarwood, 2000; Yarwood & Evans, 1998, 1999, 2000) that revealed how national distributions of livestock could be explained with reference to changing farming practices (Yarwood & Evans, 1999) as well as historic associations between breeds and places (Yarwood & Evans, 2000). The broader point was that livestock and landscape had a complex relationship that reflected not only the economics of farming but the cultural value placed on particular breeds of animals in a locality.

A further study of Welsh livestock (Yarwood & Evans, 2003, 2006) allowed the scope of these investigations to be extended to non-rare, mainstream breeds. Again, it noted that economically viable breeds were diffused across national and international farming landscapes (Tonts *et al.*, 2010; Yarwood *et al.*, 2010), while breeds with strong local identities were often clustered in particular localities (Yarwood & Evans, 2006). Further work has pointed to noticeable differences in the distribution of cattle *within* counties of broadly similar economic and environmental conditions (Figure 1) (Yarwood & Absalom, 2006), underlining the continuing importance of local farming cultures and traditions in determining the distribution of livestock on landscape.

Empirical mapping of this nature is important for landscape research for two reasons. First, it has much practical value for the conservation of livestock. The culling of herds in the FMD outbreak revealed that breeds concentrated in specific places were particularly susceptible to disease. Consequently, the Rare Breed Survival Trust (RBST) now recognises that 'Geographically Concentrated' breeds are worthy of protection and has worked with Nick Evans to map their location (RBST 2009). Second, these maps revealed that associations between breeds of livestock and local landscapes continue to be important despite significant and complex changes to farming.

Maps of livestock can be thought of as texts that can be interpreted to reveal the various economic, cultural and environmental factors that shape their distributions across different landscapes. The presence or absence of particular breeds on landscape reflects different and changing views of what constitutes 'good' farming and how breeds are valued in particular localities. Animals are, however, more than dots on maps. While maps tell us *where* livestock are located, Baker (1993, p.4) reminds us that 'any understanding of the animal, of what the animal means to us, will be informed by and inseparable from our knowledge of its cultural representation'. In order, therefore, to better understand *how* animals are viewed in these landscapes the following section considers how livestock have been differently imagined using perspectives from ecology, science and art.

3. Imagining Livestock and Landscape

i) Physical ecosystem engineers

Ecology seeks to understand the spatial and temporal patterns of the distribution and abundance of organisms, including the causes and consequences of these patterns. In this context, ecologists have sought to understand livestock as 'ecosystem engineers' that directly or indirectly control the availability of resources to others (Derner *et al.*, 2009; Llan *et al.*, 2009).

Ecologists have investigated how livestock impact unevenly on habitats. Although much of this literature focuses upon understanding landscape-scale patterns of herding, often in arid and semi-arid rangelands (Cleary, 1987; McCabe, 2003), the effects of farm management practices have received attention in Britain and Europe (McMahon *et al.*, 2010). The ecological costs of livestock farming on the landscape can be dramatic: from the loss of biodiversity and lowering of population densities for taxa to the disruption caused to nutrient cycling and succession (Power, 2010). Empirical work at the micro (farm/field) level focuses on the 'currencies' used by livestock in their foraging decisions (Isselstein *et al.*, 2007; Rook *et al.*, 2004) and their beneficial impact on flora (Small, 2002), fauna (Gardiner, 2009; McMahon *et al.*, 2010), Sites of Special Scientific Interest (Evans *et al.*, 2003) and woodlands (Hancock *et al.*, 2010) (Figure 2).

Another body of work has examined the impact of animal diseases on landscape ecosystems (Alexander & McNutt, 2010). This involves understanding interactions between species, disease vectors, pathogens and drivers of ecosystem change (Ostfeld, 2009). Here, defining the network through which disease can spread has included ecological studies on the movement of cattle between and within farms (Carslake *et al.*, 2011; Keeling *et al.*, 2010) and relationships between livestock, other domesticated animals and wildlife (Dion *et al.*, 2011; Vosloo *et al.*, 2009). Landscape ecology, GIS analysis (Clements & Pfeiffer, 2009),

ecological niche modelling (Peterson, 2006), as well as lay and professional knowledges (Enticott, 2003; Enticott *et al.*, 2011) have contributed to understandings of livestock as 'virus maintenance hosts', a species to be isolated and controlled through restrictions on their movement or culled along with other animals (Enticott, 2008).

What emerges in these strands of ecological work is how livestock, through their relationship with other organisms and as animals-in-habitat, transform the composition of ecosystems either positively, by playing a role in conservation, or negatively through overgrazing and trampling. Yet, there is wider debate here on the place of animals in the landscape: do 'traditional', 'native' breeds rather than 'commercial' breeds meet biodiversity and production goals in pastoral ecosystems (Small, 2002)? What are the implications of de-domestication (Gamborg *et al.*, 2010) and re-wilding (Buller, 2008) for livestock? In posing these questions the fault lines between ecological theory/practice, individual farm/sustainable land management, wild/domestic, human/animal continue to be drawn. Despite these debates, the prime reason for animals existing in these landscapes is an economic one and so it is important to understand how livestock are valued commercially.

ii) Species bovine

Every step in a farm animal's life is studied scientifically because it has the potential to determine if an animal generates economic profit or loss for people. Work by Lewis Holloway and colleagues (Gibbs *et al.*, 2009; Holloway & Morris, 2008; Holloway *et al.*, 2009; Morris & Holloway, 2009) has drawn upon Foucault's ideas of biopower to paint a stark picture of the ways in which animals and breeds are selected scientifically on the basis of statistical criteria (e.g. genetic markers, Estimated Breeding Values).

Selecting livestock in this way has led to a series of debates around the genetic diversity of livestock populations and their role in contributing to the loss, replacement or dilution of local breeds (Boettcher *et al.*, 2010). This includes scientific work looking at the genetic makeup of animals and how this varies according to the geography of a given landscape and the use of statistical techniques to detect spatial patterns (Jombart *et al.*, 2008) (Figure 3). Amid the professionalization of the veterinary profession (Enticott *et al.*, 2011) and public awareness of how livestock are reared, animal scientists find themselves traversing the line between production and welfare. This has led some scientists to develop animal based measures of welfare assessment (Hubbard & Scott, 2011) under different husbandry systems (Ursinus *et al.*, 2009) on farms (Hemsworth, 2003), at markets, during transport and in slaughterhouses (Gregory, 2008).

iii) Artefacts

If ecologists are concerned with how livestock interact with and in the environment and scientists with productivity and welfare, then artists attempt to make them meaningful to wider publics (Baker, 1993; Velten, 2007). Depending upon the context of the representation, animals will be portrayed in different landscapes, in different ways, for different audiences (Burgess, 1990).

Paintings, including ‘The Lincolnshire Ox’ by George Stubbs (c. 1790), and poetry, such as ‘With the Cattle’ by Andrew Barton Paterson (1896), celebrate the place of livestock on

farmed landscapes. Collections of portraits of prize livestock at the Rothamsted Library[1], the Agricultural Economics Research Institute at Oxford[2] and at the Museum of English Rural Life (Reading)[3] reveal much about how elite views of livestock have changed over time. Ostensively they provide a pictorial counterpoint to statistical analyses yet do the same task: they make a case that some breeds and animals are worthier of a place in farming landscapes than others.

By contrast, contemporary, popular media (especially advertisers) often distance livestock and farming practices. Yet, landscape is still important here. A common ploy is to distance and then re-connect food products with the places where they were made (Bunce, 1994). Thus, consumers are encouraged to associate natural-looking landscapes with natural products without thinking too closely about the processes that connect them. Meat packaging, for example, often shows the landscape in which cattle are grazed but hides the industrial production and transportation of meat (Yarwood & Evans, 2006). DuPuis (2002) noted that a 1901 advertisement for Horlicks' milk used a picture of a virginal milkmaid, with one hand placed protectively round a contented cow's neck and the other holding a jar of malted milk, in a timeless rural landscape to associate the product with purity. Another approach is to portray cows themselves comically and anthropomorphically, yet their produce as wholesome and healthy (Yarwood, 2005). Again, the aim is to draw the consumer's gaze away from the realities of farming and food processing.

[1] Rothamsted Library is one of the oldest specialist agricultural collections in the UK. It includes more than 200 prints and paintings of British farm livestock. More information about the collection is available online at http://www.rothamsted.ac.uk/Content.php?Section=Library

[2] The catalogue of manuscripts collected by the Institute of Agricultural Economics (University of Oxford) can be viewed online at http://www.bodley.ox.ac.uk/dept/scwmss/wmss/online/1500-1900/agricinst/agricinst.html

[3] Information on the main collections at the Museum (library, archives, photographs and objects) and the bibliography of British and Irish rural history can be obtained from the online collections catalogue at http://www.reading.ac.uk/merl/the_collections/ad_search.html

However, artists such as Damien Hirst, Francis Bacon and Sue Coe have used images of animal carcasses to bring the connection between livestock and meat back into focus. Hirst[4] has created a series of artworks in which dead animals are preserved, and sometimes dissected, in formaldehyde. Sue Coe's work is directed against cruelty to animals recording factory farming and meat packing industry in pictures and words: 'Machine Cow'[5] (1996) depicts a mosaic of cows with full udders and milking equipment attached to them.

The 2001 Foot and Mouth Disease Outbreak in the UK inspired artists (Yarwood, 2005), poets (Nerlich & Doring, 2005) and musicians (Yarwood & Charlton, 2009) to record how significant livestock are to everyday farming landscapes. If burning cattle pyres were shocking intrusions into taken-for-granted rural landscapes, then the silent fields they left behind served to underline the importance of livestock to the sights, smells and experiences of the countryside. Chris Chapman's 'Silence at Ramscliffe' (Chapman & Crowden, 2005) used black and white photographs to record the culling of cattle on Ramscliffe Farm, North Devon. Some of the most powerful photographs are those that show the absence, rather than the expected presence, of livestock in fields and farms.

Finally, a concern with making livestock visible has seen art work taken to landscapes rarely associated with farm animals. 'CowParade'[6] sees hundreds of life size fibreglass cows colourfully painted and decorated by artists, celebrities and members of the public displayed

[4] For a comprehensive pictorial and written archive of Damien Hirst's work (including details of current and forthcoming exhibitions, library and audio/video footage) do see: http://www.damienhirst.com

[5] Sue Coe's 'machine cow' watercolour can be viewed at the Galerie St. Etienne (http://www.gseart.com/Artists-Gallery/Coe-Sue/Artworks/Coe-Sue-Machine-Cow-2302.php). Information about Sue Coe's exhibitions, prints and interviews can be found online at http://www.graphicwitness.org/coe/enter.htm

[6] CowParade is one of the largest international art exhibitions and has featured in cities across the globe. Fibreglass sculptures of cows are decorated by local artists and distributed across city centres in public spaces such as parks, train stations, shopping centres and commercial districts. CowParade website: http://www.cowparade.com/

in cities across the world. Joe Farfard's (1985) 'pasture'[7] consists of a series of bronze bulls in Toronto's financial district and a charging bull sculpture stands near Wall Street in New York: both are designed to depict energy, strength and unpredictability.

What we learn from these various takes on livestock is the importance of cultural rather than physical factors in determining their place in landscapes. Understandings of livestock become shaped by representation. Shukin (2009) uses the term 'rendering' to describe how such representations 'boil down' and 'recycle' animals as both capital and biological cipher (see also Anker & Franklin, 2011). In practice, a juxtaposition of productive spaces (such as the farmyard, field and marketplace) and consumptive spaces (the kitchen/fridge and gallery) occurs. Livestock as ecosystem engineers, production machines and pieces of artwork act as a catalyst for scientists and social scientists to adopt proliferating perspectives from which to listen to and engage with livestock in mutating landscapes. All, though, deal with representations of animals on landscape, be it through ecological data, semen analysis or anthropomorphic picture. But, as Glendinning (1998) reminds us, where are the *real* animals and the everyday practices on landscapes amid all these constructions?

4. The Everyday Lives of Livestock in Landscape

In an effort to stop separating the world out between humans and animals (Whatmore, 2005), attempts are being made to seek ways that make sense of animals 'as animals' (Philo & Wilbert, 2000), 'strange persons' (Whatmore & Thorne, 1998) or 'other social groups' (Philo & Wolch, 1998). Two trajectories emerge. First, Actor Network Theories (ANT), together with ideas of companionship and hybridity, strive to flesh out heterogeneous entanglements

[7] 'The Pasture' can be viewed on Joe Farfard's website at: http://www.joefafard.com/joe%20web%20page/publicworks/pasture.html

of social life. Second, performative approaches consider how animals themselves form exchanges, accumulate gestures, leave traces and inhabit landscapes through practices of dwelling.

i) Hybridity

For some, the need to express the ways in which animals might be active in the creation of space, place and history has gestured towards a need for a dialogue between geography and ANT (Hitchings, 2003; Murdoch, 1998). ANT provides a legend for mapping the vast 'middle kingdom' of non-human entities that increasingly proliferates the world (Latour, 2005). In deploying this ontology, geographers have illustrated how livestock have become enrolled within networks, travelling through all kinds of nodes as part of a serious attempt to conceptualise their animalian subjectivity (Evans & Yarwood, 2000; Woods, 1998).

On the one hand this draws attention to how scientists account for livestock and the way in which the world seems to be. Woods (1998), for example, describes the 'involuntary participation' of livestock as they were mobilised statistically by politicians, scientists and the agricultural lobby in the BSE-CJD outbreak. On the other hand, this forms part of an acknowledgement of the role and function of non-human entities in acting through the networks in which they are immersed. For livestock, their enrolment may have been involuntary, but they harboured, incubated and spread a disease in ways which returned to 'haunt' human cultural lives. In this way, the networks in which livestock are immersed give rise to a 'mobile swirling landscape' (Thrift, 1994 p.220) within which they compete for attention. Indeed, Allen (2011) posits that ANT provides an important step in moving beyond the notion that landscape focuses merely on the rural and local scale.

This philosophical drive towards collective involvement in the world has also been taken up by Donna Haraway who turns our attention to not what counts as nature but to 'who' gets to inhabit nature and what is at stake in making these judgements. The work itself is pitched in terms of hybrids, cyborgs, mosaics, contact zones and is operationalized through a variety of figures (Haraway, 2008). It is here that Haraway's theoretical enterprise departs from ANT in writing from inside a situation rather than describing a network. Haraway (2008) indicates that livestock are 'intimate' with humans through processed body parts and/or seeing the places where they live. In this ontology, livestock are not 'represented' as facts or enclosed in a property form but become instances of 'speculative fiction' where species boundaries are no longer sacred. Livestock are encountered in a multi-species landscape, at scales and in spaces that often elude understandings of commodity chains. Haraway's work questions how should we encounter and live well with others, including livestock, who are not like us.

Sarah Whatmore's (2002) 'hybrid geographical enterprise' points a way through the technical emphasis of ANT and corporeal/ethical stance of Haraway. Using the term 'inside' to contemplate how the everyday worlds of people and animals are already in the process of being mixed up, she shows that animals matter 'both as active agents and experimental subjects' (Whatmore & Thorne, 1998 p.444). Through a litany of food scares, she illuminates how livestock are embodied in ways that set them apart from their contemporary industrial body parts and meat machines (Stassart & Whatmore, 1993), occupying the middle ground between production and consumption. Whatmore (2009) charts the political, economic and animal carnage associated with BSE as part of a call for relational ethics. She maps the 'hybrid body spaces' of a cow (Whatmore, 2009 p.118), dissecting its body with inscriptions:

antibiotics, pasture pesticides, anti-oxidants, flavour enhancers, salmonella, growth hormones, anti-bacterial drugs, sheep offal, listeria, preservatives and meat colourings.

ii) Performances

Non-representational theory (NRT) turns attention to everyday practices that usually go unnoticed in the background of our lives: interactions that take place in an immediate and indeterminate way, (Thrift, 2000); that are partially invisible and all too often excluded from what counts as thought (Thrift, 2004). Although they do not deal explicitly with animals, Thrift's concept of the non-representational (2007) and 'Lifeworld Inc' (2011) are helpful in thinking about our interactions and pauses with livestock and of how they provoke awareness in untoward ways in order to produce new means of association (see Carolan, 2008). This means taking seriously the landscapes where we encounter livestock and the ways in which they/we interact. Yet social scientists have been slow to fully respond to thinking about livestock through the emotive registers set out in these theoretical strands.

In an effort to fill this gap, Sellick's (2006) doctoral work has attempted to show moments of encounter with (real) livestock in landscape. It draws attention to the daily lives and interactions of individual animals and the traces and imprints that they leave on the landscape that has been lacking in academic studies, as the following two examples illustrate:

> 'You get to know them…working with them day in, day out…They're like extended members of the family…all individuals with their own temperaments…own behaviours and ways of doing things in the field…they pass it on when more cows join the herd' (Martin, dairy farmer, Wednesday 31 July 2002 (Sellick, 2006)).

> I am slowly beginning to grasp how cattle organise themselves…the field is a kind of territory to them... they divide themselves into discrete groups that are crucial in determining how they may use and move through the field…After milking, and for the first few minutes, the herd tend to spread out across the field - a kind of disorganised milling about, trampling on vegetation, nudging each other, short moos - then, within about thirty or forty minutes...settle themselves into particular groups, each group occupying a different section of the field…the groups themselves are comprised of between four and eight cows, often determined by age, size, interactions with each other and milking time. These groupings, however, are flexible and liable to change. I have noticed, for example, how Lorna and Verity like spending time licking each other and it is Lorna who tends to initiate this by leaving Sophie's group to wander over to Verity…On another occasion I observed Rachel trying to join Barbara/Melissa's group, her presence unwelcome as she was head butted by Melissa and quickly withdrew…What I have come to regard as the 'lead' group (headed by Barbara and Melissa but led by Yazzey) set the pace and tone of movement: Yazzey, Barbara, Melissa, Rosie, Margaret, sometimes Violet, always taking the herd from left to right across the field - Yazzey just nudging in front of the group as they move (Fieldwork Diary Entry, Wednesday 22 August 2002, (Sellick 2006))

These examples aim to look at things and 'present' (not represent) the (individual) animal in its environment or 'umwelt': the world in which it lives, recognises and makes (von Uexkull, 2010). The concept of dwelling (Heidegger, 1971) helps this shift. It provides resources for engaging with geographies of the living and paying attention to how beings change socio-material possibilities in the fabrications of place (Ingold, 1995). Dwelling emphasises the

‘agent in its environment’ or ‘being in the world’ as opposed to a self-contained individual confronting a world ‘out there’ (Wylie, 2007). Drawing on the term ‘umwelt’ (see von Uexkull & O’Neil, 2010), Heidegger drew a distinction between the animal’s captivation in its umwelt - a farm - and the way its world is disclosed and opened up to human beings. This moves analysis away from a ‘building perspective’, where human mental constructs are imposed upon the world, to a ‘dwelling perspective’ where any act of building, living and thinking, by non-human as well as human actors, is formed in the context of being in the world (Bear, 2011). The following extracts give a sense of this (Figure 4):

> Margaret’s head is buried in the trough…she lifts up - a long strand of straw attached to her nostril…She stretches out her tongue but the straw remains. …Her head plunges again, I walk up to the trough and peer over, she’s chopping the fodder into smaller bits, the initial movement an almost yet not quite clasping motion at the tip of her mouth, chunks disappearing, her jaw moving from side to side. (Fieldwork notes, Friday 26 July 2002, (Sellick, 2006))

> In the field with Margaret – five steps forward, bending down, sniffing, pause, one gulp – ears flick back and swish of the tail, then two smaller steps backwards – eyes poised to the ground, skimming the grass – lips, visible, pause...avoiding the long green shoots...chewing and crunching noises – lower jaw making clockwise, circular motions, tongue occasionally poking out. (Fieldwork notes, Sunday 30 July 2003, Sellick 2006))

What these modes of theoretical enquiry hold onto is a sense that livestock play a role as co-constituents in place making and spatial formations. The crucial manoeuvre here is retrieving

individual animals from a mound of relations to disclose how creatures such as Margaret disturb their human-imposed emplacement in the world. The strands at work urge us to move away from understanding breeds and characteristics of livestock in landscape, or indeed a 'node' caught up in (technological) networks, to apprehend the everyday lives of individual animals and their intimate relationships in these environments.

It might be queried whether such accounts indulge in anthropomorphism when trying not to give people the final word (Hinchliffe, 2003; Jones, 2003), but they do recognise and ethically question the influential part that humans play in livestock lives and, in so doing, the naturalness or artificiality of the spatialities that livestock are afforded. As Margaret leaves her (hoof) imprints on the landscape, is the environment that Martin-the-farmer/we have created for her as it should be?

5. Conclusion

This has been a necessarily wide-ranging review and we acknowledge that we have barely grazed some areas of study. Our purpose, though, has been to argue that since the mid-1990s studies have benefitted from a plethora of empirical and theoretical work that has sought to understand how livestock have contributed to different landscapes. We have identified a body of work that attempts to make sense of the ways in which livestock have been shaped by human culture, aesthetics, sciences, technologies and the very real implications of these interpretations on landscape. We have also noted literature that highlights the obscured capacities that livestock bring to any notion of what is taking place – culminating in a sense of *'livestockness'.* Study has indeed moved on to pastures new, illuminating a set of landscape arenas, from grounded 'material' places (farm/pastoral ecosystem) to technological

spaces (genetic markers/estimated Breeding Values) to virtual spaces (Holloway 2002), opening up a series of debates about how to study different types or breeds of livestock in different types of landscape (from the site based grazing of traditional breeds of livestock to support biodiversity management to their charred remains during FMD).

Despite the richness of these approaches, there are dilemmas. A key theme in many emerging studies has been to move away from human-centric views of livestock. Are there ways for livestock to 'participate', 'be there' and 'develop as they will' (Lulka, 2009 p.385)? What are the life experiences of individual animals? What might be the implications of recognising them as 'distinct subjects, worthy of epistemological, political and ethical distinction' (Jones, 2003 p.293)? Yet, all these attempts to bring animals back in are dependent upon human points of departure and power. As Jones (2003) and Holloway *et al* (2009) illustrate, power relations between people and animals are far from equal. Although efforts to privilege animal perspectives are worthy, it is important to remember the structural constraints of livestock. Paraphrasing Marx, animals, like people, make their own history but rarely under circumstances chosen by them. If this is the case, there is room in the lexicon of animal studies for structuralist approaches that explain the presence of animals within farming as well as those that seek to treat animals as sentient beings worthy of their own world-view. Understanding 'where' livestock are and what they 'do' need to be 'situated' in a whole series of landscape arenas, imaginations and performances (Greenhough & Roe, 2011; Whatmore & Thorne, 1998). We maintain, therefore, that it is important to recognise the richness and diversity of approaches we have highlighted in animal geography in order to provide a nuanced understanding of livestock and landscape that reflects its diversity and complexity. It is not enough, though, to simply theorise these relationships.

While there is evidence that some public and charitable bodies pay attention to livestock (e.g. Natural England, Rare Breeds Survival Trust) and that some European Union countries have followed agri-environmental policies to protect specific local breeds capable of landscape conservation (Yarwood & Evans, 2003), little attention has been paid to livestock *per se* in the landscape. Livestock continue to be valued by many as conservation tools (ecological engineers) or as milk-in-the-carton or beef-on-the-hoof (species: bovine). This article has shown that farmers and livestock contribute to the landscape by their presence alone and in ways which often go against the grain of human designs and policy-making. All too often livestock remain 'objects' that are valued for 'something', rather than viewed as 'subjects' valued as 'someone'. Until academic research and policy makers (re)connect, landscape studies of livestock will remain out to graze.

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Figure 1: Distributions of Devon Ruby Red and South Devon Cattle

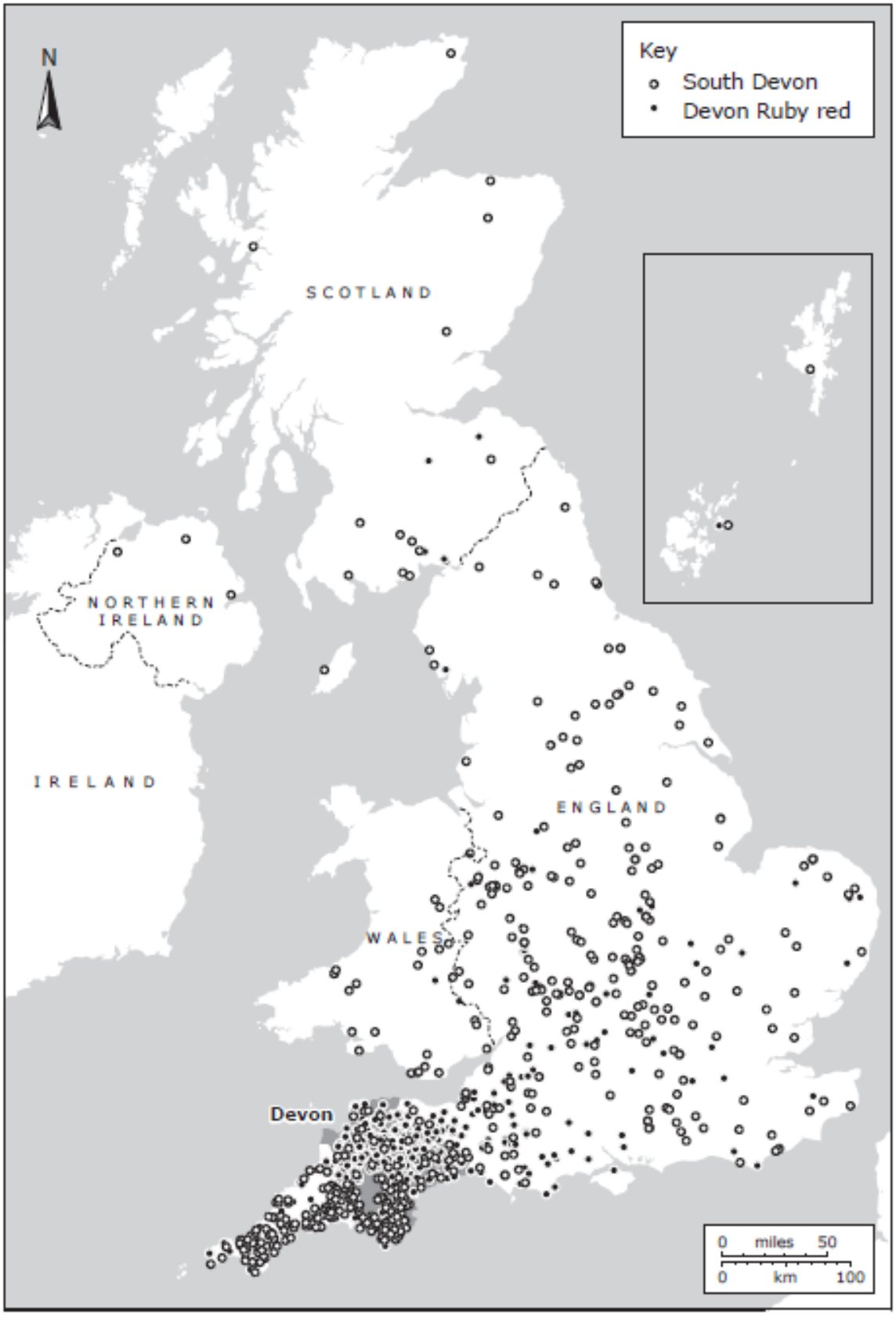

Figure 2: Traditional grazing of beef shorthorns to help conserve species and habitats, County Durham (2011). Image courtesy of Julia Stephenson, UTASS.

Figure 3: A training session to help farmers develop their businesses and improve levels of profitability, County Durham (2011). Image courtesy of Julia Stephenson, UTASS.

Figure 4: Margaret